

**HINGE POSITION LOCATION THAT CAUSES PENDULOUS AXIS TO BE
SUBSTANTIALLY PARALLEL WITH DRIVE COMPONENT DIRECTION****ABSTRACT**

A drive component that comprises a drive axis, a pendulous sensor component that
5 comprises a center of mass, and a hinge component that comprises a rotation axis of an
electromechanical system. The drive component makes a determination of a drive direction.
Upon the determination of the drive direction, the drive component determines an alignment
of a pendulous axis, that intersects the center of mass of the pendulous sensor component and
the rotation axis of the hinge component, with the drive axis of the drive component. The
10 drive component and the pendulous sensor component are coupled with the hinge component.
A location of the hinge component causes the alignment of the pendulous axis to be
substantially parallel with the drive direction of the drive component.